AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) An image processing apparatus for supplying received image data to an output device to reproduce the image data, an actual reproduction range of the output device decreasing from a reference range over time of operation of said output device, the apparatus comprising:

a converter for converting the received image data into image data of a standard color space;

a decision portion for deciding whether the image data converted by the converter are within the reference range of [the] a color reproduction in the output device; and

a controller for controlling the output device to perform calibration ~~of making~~ to increase the color reproduction range of the output device close to the reference range when the decision portion has decided that the image data are out of the reference range, wherein

the color reproduction range of the output device is compared to the reference range to perform calibration on the output device.

2. (Original) The image processing apparatus according to claim 1, further comprising a display for displaying a message asking whether the calibration is necessary or not when the decision portion has decided that the image data are out of the reference range, wherein the

controller controls the output device to perform the calibration in accordance with a specific instruction operation responding to the message displayed on the display.

3. (Original) The image processing apparatus according to claim 1, wherein the output device performs γ correction of the input image data, the corrected image data are reproduced, and characteristics of the γ correction of the output device are changed in the calibration.

4. (Original) The image processing apparatus according to claim 1, wherein in the calibration the output device reproduces a predetermined test pattern and the controller calibrates the color reproduction range of the output device so that the reproduced test pattern becomes a predetermined target value.

5. (Original) The image processing apparatus according to claim 1, wherein the output device reproduces the image on a piece of paper.

6. (Original) The image processing apparatus according to claim 5, wherein in the calibration the output device reproduces a predetermined test pattern on a piece of paper, and the controller calibrates the color reproduction range of the output device so that the image data obtained when an image reader reads the test pattern become a predetermined target value.

7. (Currently Amended) An image processing method for reproducing image data by an output device, an actual reproduction range of the output device decreasing from a reference range over time of operation of said output device, the method comprising the steps of:

receiving the image data;

converting the received image data into image data of a standard color space;

deciding whether the image data converted in the converting step are within the reference range of the color reproduction in the output device; and

controlling the output device to perform calibration ~~of making~~ to increase the color reproduction range of the output device close to the reference range when the image data have been decided to be out of the reference range in the deciding step, wherein

performing calibration includes comparing the color reproduction range of the output device to the reference range.

8. (Original) The image processing method according to claim 7, further comprising the step of displaying a message asking whether the calibration is necessary or not when it is decided that the image data is out of the reference range in the deciding step, wherein the controlling step includes the step of controlling the output device to perform the calibration in accordance with a specific instruction operation responding to the message displayed on the display.

9. (Original) The image processing method according to claim 7, wherein the output device performs γ correction of the input image data, reproduces the corrected image data, and characteristics of the γ correction of the output device are changed in the calibration.

10. (Original) The image processing method according to claim 7, wherein the controlling step includes the steps of:

reproducing a predetermined test pattern in the output device; and

calibrating the color reproduction range of the output device so that the test pattern reproduced in the reproducing step becomes a predetermined target value.

11. (Original) The image processing method according to claim 7, wherein the output device reproduces the image on a piece of paper.

12. (Original) The image processing method according to claim 11, wherein the controlling step includes the steps of:

reproducing a predetermined test pattern on a piece of paper in the output device; and

calibrating the color reproduction range of the output device so that the image data obtained when an image reader reads the test pattern reproduced in the reproducing step become a predetermined target value.

13. (Currently Amended) An image processing apparatus comprising:

a γ correction portion for performing γ correction of [[the]] received image data:

an output device for reproducing the image data corrected by the γ correction portion;

a converter for converting the received image data into image data of a standard color space;

a decision portion for deciding whether the image data converted by the converter are within [[the]] a reference range of [[the]] color reproduction in the output device, an actual color reproduction range in the output device decreasing from the reference range of color reproduction over time of operation of said output device; and

a controller for calibrating the characteristics of the γ correction portion so as to [[make]] increase the color reproduction range of the output device close to the reference range when the decision portion has decided that the image data are out of the reference range, wherein

the color reproduction range of the output device is compared to the reference range to perform calibration on the output device,

the γ correction portion corrects the image data by the calibrated characteristics, and

the output device reproduces the corrected image data.

14. (Original) The image processing system according to claim 13, further comprising a display for displaying a message asking whether the calibration is necessary or not when the decision portion has decided that the image data are out of the reference range, wherein the controller controls the output device to perform the calibration in accordance with a specific instruction operation responding to the message displayed on the display.

15. (Original) The image processing system according to claim 13, wherein in the calibration the output device reproduces a predetermined test pattern, and the controller calibrates the characteristics of the γ corr4ection portion so that the reproduced test pattern becomes a predetermined target value.

16. (Original) The image processing system according to claim 13, wherein the output device reproduces the image on a piece of paper.

17. (Original) The image processing system according to claim 16, further including an image reader, wherein in the calibration the output device reproduces a predetermined test pattern on a piece of paper, and the controller calibrates the characteristics of the γ correction portion so that the image data obtained when an image reader reads the test pattern become a predetermined target value.